

Appendix H
Supplemental Information – Link Two

Appendix H-1

Vascular Plant Species Observed – Link Two

Appendix H-1

Vascular Plant Species Observed – Link Two

Scientific Name	Common Name
Acacia constricta	whitethorn acacia
Acacia greggii	catclaw
Acalypha neomexicana	
Acourtia nana	desert holly
Agave parryi	Parry's agave
Agave sp.	agave
Ambrosia dumosa	
Anaphalis margaritacea	pearly everlasting
Arctostaphylos pungens	Madrone
Aristida purpurea	three-awn
Aristida ternipes	three-awn
Asclepias linaria	pine-needle milkweed
Atriplex canescens	fourwing saltbush
Baccharis salicifolia	seep willow
Baccharis sarothroides	desert broom
Baileya multiradiata	
Boemmeria hispida	
Bothriochloa barbinodes	cane bluestem
Bothriochloa marginatus	beardgrass
Bouteloua barbata	grama
Bouteloua curtipendula	sideoats grama
Bouteloua eriopodum	black grama
Brickellia sp.	brickelbush
Buchloe dactyloides	buffalograss
Calliandra conferta	false-mesquite calliandra
Calliandra eriophylla	fairy duster
Carnegiea gigantea	saguaro
Celtis spinosa Spreng. var. pallida	desert hackberry
Cercidium floridum	blue paloverde
Cercidium microphyllum	foothill paloverde
Cercidium spp.	Palo verde
Cheilanthes	lindheimer's lip fern

Scientific Name	Common Name
Isocoma tenuisecta	burroweed
Isocoma wrightii	burroweed
Juglans microcarpa	walnut
Juniperus cf. coahuilensis	roseberry
Kochia scoparia	
Koeberlinia spinosa	allthorn
Larrea tridentata	creosotebush
Lepidium alyssoides	
Lycium torreyi	
Machaeranthera riparia	
Mimosa biuncifera	wait-a-minute bush
Mollugo cerviana	
Muhlenbergia porteri	bushy muhly
Nolina microcarpa	beargrass
Notholaena sp.	
Opuntia chlorotica	pancake prickly pear
Opuntia engelmannii	Engelmann's prickly pear
Opuntia fulgida	jumping cactus
Opuntia leptocaulis	desert Christmas cholla
Opuntia phaeacantha	Sprawling prickly pear
Opuntia spinosior	cane cholla cactus
Opuntia spp.	Prickly pear cactus
Opuntia violacea Engelm. var. macrocentra	purple prickly pear
Panicum cf. antidotales	
Panicum sp.	Panic grass
Parkinsonia sp.	parkinsonia
Pellaea sp.	
Populus fremontii	Fremont's cottonwood
Proboscidea althaeifolia	sand devil's claw
Prosopis pubescens	screwbean mesquite
Prosopis glandulosa	honey mesquite
Psilostrophe cooperi	paper daisy

Scientific Name	Common Name
<i>lindheimeri</i>	
<i>Chilopsis linearis</i>	desert willow
<i>Chloris virgata</i>	fingergrass
<i>Chrysothamnus pulchellus</i>	southwest rabbitbrush
<i>Commelina dianthifolia</i>	dayflower
<i>Condalia spathulata</i>	
<i>Coryphantha vivipara</i>	
<i>Croton pottsii</i>	leatherweed croton
<i>Dasyilirion wheeleri</i>	sotol
<i>Dasyochloa pulchella</i>	fluffgrass
<i>Datura wrightii</i>	Indian apple
<i>Dimorphocarpa wislizenii</i>	
<i>Echinocereus fasciculatus</i>	bundle hedgehog
<i>Echinopedon wrightii</i>	
<i>Ephedra trifurca</i>	long leaf ephedra; Mexican Mormon tea
<i>Eragrostis lehmanniana</i>	Lehman lovegrass; African lovegrass
<i>Ericameria laricifolia</i>	turpentine bush
<i>Eurotia lanata</i>	winter-fat
<i>Ferocactus wislizenii</i>	barrel cactus
<i>Flourensia cernua</i>	tarbush
<i>Fouquieria splendens</i>	ocotillo
<i>Gutierrezia microcephala</i>	threadleaf snakeweed
<i>Gutierrezia sarothrae</i>	snakeweed
<i>Heliotropium sp.</i>	heliotrope
<i>Hibiscus denudatus</i>	hibiscus
<i>Hilaria mutica</i>	tobosa grass

Scientific Name	Common Name
<i>Psoralea scoparius</i>	dalea
<i>Quercus arizonica</i>	Arizona scrub oak
<i>Quercus emoryi</i>	
<i>Rhus microphylla</i>	desert sumac
<i>Rumex hymenosepalus</i>	dock
<i>Salix gooddingii</i>	willow
<i>Salix sp.</i>	willow
<i>Salsola australis</i>	Russian thistle
<i>Selaginella sp.</i>	
<i>Setaria leucophila</i>	foxtail grass
<i>Solanum eleagnifolium</i>	purple nightshade
<i>Sphaeralcea incana</i>	
<i>Sporobolus erioides</i>	sporobolus
<i>Sporobolus contractus</i>	dropseed
<i>Sporobolus giganteus</i>	giant dropseed
<i>Sporobolus airoides</i>	alkali sacaton
<i>Sporobolus cryptandrus</i>	sand dropseed
<i>Suaeda suffrutescens</i>	shrubby seepweed
<i>Tiquila canescens</i>	
<i>Xanthium strumarium</i>	cocklebur
<i>Yucca elata</i>	soaptree yucca
<i>Yucca baccata</i>	datil yucca; banana yucca
<i>Yucca torreyi</i>	Torrey's yucca
<i>Zinnia acerosa</i>	spinyleaf zinnia; desert zinnia
<i>Zinnia pumila</i>	zinnia

Appendix H-2

List of Wildlife Species Observed – Link Two

Appendix H-2

List of Wildlife Species Observed—Link Two

Common Name	Scientific Name	Location
ARIZONA		
Birds		
American kestrel	<i>Falco sparverius</i>	Grasslands
Black-throated sparrow	<i>Amphispiza bilineata</i>	TX Canyon
Blue-gray gnatcatcher	<i>Poliopitila caerulea</i>	TX Canyon
Brown-headed cowbird	<i>Molothrus ater</i>	Agriculture
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	East of Tucson
Cassin's finch	<i>Carpodacus cassinii</i>	TX Canyon
Chihuahuan raven	<i>Corvus cryptoleucus</i>	Ubiquitous
Cooper's hawk	<i>Accipiter cooperii</i>	TX Canyon
Curve-billed Thrasher	<i>Toxostoma curvirostre</i>	Cacti desert east of Tucson
Flycatcher	<i>Empidonax sp.</i>	TX Canyon
Field sparrow	<i>Spizella pusilla</i>	TX Canyon
Gambel's quail	<i>Callipela californica</i>	Ubiquitous
Greater roadrunner	<i>Geococcyx californianus</i>	Ubiquitous
Harris hawk	<i>Parabuteo unicinctus</i>	Grasslands
House sparrow	<i>Passer domesticus</i>	Benson-Tucson
Killdeer	<i>Charadrius vociferous</i>	Agriculture
Meadowlark	<i>Sturnella neglecta</i>	Ubiquitous
Mexican chickadee	<i>Parus sclateri</i>	Cacti desert
Morning dove	<i>Zenaida macroura</i>	Ubiquitous
Northern cardinal	<i>Cardinalis cardinalis</i>	TX Canyon, East of Willcox
Northern mockingbird	<i>Mimus polyglottos</i>	TX Canyon
Phainopepla	<i>Phainopepla nitens</i>	TX Canyon - Tucson
Pyrrhuloxia	<i>Catdinalis sinuatus</i>	TX Canyon, East of Willcox
Red-tailed hawk	<i>Buteo jamaicensis</i>	Ubiquitous
Rock dove	<i>Columba livia</i>	Ubiquitous
Song sparrow	<i>melospiza melodia</i>	Ubiquitous
White-crowned sparrow	<i>Zonotrichia atricapilla</i>	TX Canyon
Mammals		
Desert cottontail	<i>Sylvilagus auduboni</i>	Ubiquitous

Common Name	Scientific Name	Location
Muledeer	<i>Odocoileus hemionus</i>	Ubiquitous
NEW MEXICO		
Birds		
American kestrel	<i>Falco sparverius</i>	Grasslands
Chihuahuan raven	<i>Corvus cryptoleucus</i>	Ubiquitous
Curve-billed thrasher	<i>Toxostoma curvirostre</i>	Akali flats grasslands
Brown-headed cowbird	<i>Molothrus ater</i>	Agriculture
Gambel's quail	<i>Callipela californica</i>	Ubiquitous
Golden eagle	<i>Aquila chrysaetos</i>	Mesquite desert
Greater roadrunner	<i>Geococcyx californianus</i>	Ubiquitous
Harris hawk	<i>Parabuteo unicinctus</i>	Grasslands
House finch	<i>Carpodacus mexicanus</i>	West of Deming
Killdeer	<i>Charadrius vociferous</i>	Agriculture
Loggerhead shrike	<i>Lanius excubitor</i>	Grasslands
Meadowlark	<i>Sturnella neglecta</i>	Ubiquitous
Mexican Mallard	<i>Anas platyrhynchos</i>	Playas
Morning dove	<i>Zenaida macroura</i>	Ubiquitous
Mountain bluebird	<i>Sialia currucoides</i>	East of Deming
Northern harrier	<i>Circus cyaneus</i>	Grasslands
Red-tailed hawk	<i>Buteo jamaicensis</i>	Ubiquitous
Rock dove	<i>Columba livia</i>	Ubiquitous
Scaled quail	<i>Callipepla squamata</i>	Mesquite desert
Song sparrow	<i>Melospiza melodia</i>	Ubiquitous
Turkey vulture	<i>Cathartes aura</i>	East of Deming
White-wing dove	<i>Zenaida asiatica</i>	East of Deming
Mammals		
Black-tail jackrabbit	<i>Lepus californicus</i>	Ubiquitous
Coyote	<i>Canis latrans</i>	Ubiquitous
Desert cottontail	<i>Sylvilagus auduboni</i>	Ubiquitous
Striped skunk	<i>Mephitis mephitis</i>	Akela Flats
TEXAS		
Birds		
Greater roadrunner	<i>Geococcyx californianus</i>	Ubiquitous
Morning dove	<i>Zenaida macroura</i>	Ubiquitous

Common Name	Scientific Name	Location
Red-tailed hawk	<i>Buteo jamaicensis</i>	Ubiquitous
Rock dove	<i>Columba livia</i>	Ubiquitous
Mammals		
Black-tail jackrabbit	<i>Lepus californicus</i>	Ubiquitous
Reptiles		
Desert tortoise	<i>Gopherus agassizi</i>	Mesquite desert

Appendix H-3

Major Soil Types – Link Two

Appendix H-3

Major Soil Types—Link Two

Soil Map Number	Soil Survey Name (italics)/ General Soil Map Unit	Description	USDA Texture	Unified Soil Classification	Limitations on Shallow Excavations	Suitability for Terraces and Diversions	Erosion Factor K (soil loss rate)	Wind Erodibility Group	Hydrologic Group
Dona Ana County, NM									
5	Pintura-Wink	Deep, nearly level to undulating, well drained and somewhat excessively drained soils that formed in alluvium modified by wind. Found on fans, terraces, and ridges.	Loamy fine sand, fine sand	SP-SM, SM	Pintura - severe, cutbanks cave; Wink - slight	Too sandy, erodes easily, soil blowing	0.20	2 - 3	A - B
10	Harrisburg-Simona-Wink	Shallow to deep, gently undulating to undulating, well drained soils that formed in residuum from sandstone, eolian material, and alluvium modified by wind; found on mesas, plains, ridges, and fans.	Sandy loam, fine sandy loam	SM	Severe, cemented pan	Cemented pan, soil blowing	0.17-0.37	2 - 3	C - D
9	Cacique-Cruces	Shallow to moderately deep, nearly level to gently sloping, well-drained soils that formed in alluvium. Found on basin floors.	Loamy sand, sandy loam	SM, SC	Severe, cemented pan	Cemented pan, soil blowing	0.15-0.32	2	C
6	Berino-Dona Ana	Deep, gently undulating to undulating, well-drained soils that formed in alluvium and alluvium modified by wind. Found on fans, piedmonts, and valley and basin floors.	Fine sandy loam, sandy clay loam	SM, SC	Slight	Soil blowing	0.17-0.24	2 - 3	B
13	Rock outcrop-Torriorhents	Rock outcrop and shallow to deep, hilly to extremely steep, well-drained soils that formed in alluvium and colluvium. Found on mountains.	Gravelly, cobbly, and stony, coarse to fine.	Not rated	Not rated	Not rated	Not rated	Not rated	Not rated
Luna County, NM									
7	Mimbres	Deep, moderately fine textured, level to nearly level soils on basin floors and alluvial fans.	Silty clay loam, loam	CL, CL-ML	Slight, severe where flooded	Clayey; moderately slow permeability; moderate shrink-swell	Not rated	Not rated	C
3	Mohave-Stellar	Deep, moderately fine textured, nearly level to gently undulating soils on alluvial fans.	Sandy clay loam, silty clay loam	CL, ML	Moderate, clay loam material	Moderate soil blowing, moderately slow permeability	Not rated	Not rated	B - C

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Major Soil Types—Link Two

Soil Map Number	Soil Survey Name (italics)/ General Soil Map Unit	Description	USDA Texture	Unified Soil Classification	Limitations on Shallow Excavations	Suitability for Terraces and Diversions	Erosion Factor K (soil loss rate)	Wind Erodibility Group	Hydrologic Group
6	Hondale-Mimbres	Deep, moderately fine to coarse textured, nearly level to gently sloping soils on alkali flats.	Loam	ML, CL	Slight	Clayey; high shrink swell; subject to piping	Not rated	Not rated	C - D
4	Bluepoint-Onite	Deep, coarse-textured, nearly level to undulating soils on alluvial fans.	Loamy sand	SM, SP-SM	Severe, subject to slumping	Very erodible; subject to piping	Not rated	Not rated	A - B
5	Pintura-Berino-Simona	Shallow to deep, coarse-textured, nearly level to undulating, hummocky soils on alluvial fans.	Loamy sand	SM, SC	Slight	Severe soil blowing hazard	Not rated	Not rated	B
Grant County, NM									
4	Stellar-Mohave-Bucklebar	Nearly level to gently sloping, well-drained, deep soils; on alluvial fans and plains.	Sandy clay loam, sandy loam	SM, ML	Slight to moderate (Stellar) too clayey	Stellar, Mohave - favorable; Bucklebar - erodes easily, soil blowing	0.24-0.38	3 - 5	B - C
Hidalgo County, NM									
7	Hondale-Playas	Deep, moderately fine textured and fine textured, nearly level to gently sloping soils on alkali flats.	Silt loam	ML	Not rated	Not rated	Not rated	Not rated	D
5	Nickel-Upton-Tres Hermanos	Very shallow to deep, medium-textured and moderately fine textured, gently sloping to very steep, limy soils on uplands.	Gravelly loam, gravelly clay loam	GC, GM, SM, CL	Not rated	Not rated	Not rated	Not rated	B - D
6	Rough Broken Land-Rock land-Lehmans	Very shallow to shallow, moderately fine textured, gently sloping to very steep, rocky and stony soils, rough broken land, and rock land on hills and mountains.	Stony clay loam; gravel or cobbles	ML, CL	Not rated	Not rated	Not rated	Not rated	D
San Simon Area, AZ									
6	Tubac-Sonoita-Signal	Very deep, well drained soils on valley side slopes, alluvial fans, and terraces.	Sandy clay loam, gravelly sandy loam, gravelly loam	SC, SM-SC, GM	Tubac - moderate, too clayey; Sonoita - slight; Signal - severe - slope	Percolates slowly, soil blowing	0.17-0.37	3 - 5	B - C

Appendix H-3

Major Soil Types—Link Two

Soil Map Number	Soil Survey Name (italics)/ General Soil Map Unit	Description	USDA Texture	Unified Soil Classification	Limitations on Shallow Excavations	Suitability for Terraces and Diversions	Erosion Factor K (soil loss rate)	Wind Erodibility Group	Hydrologic Group
2	Hondale-Bluepoint-Gothard	Very deep, somewhat excessively drained to moderately well drained, saline and sodic soils on dunes, alluvial fans, and terraces.	Loam, loamy sand, fine loamy sand	ML, SM	Hondale – moderate, too clayey; Bluepoint - severe, cutbanks cave; Gothard - slight	Hondale – percolates slowly; Bluepoint - too sandy, soil blowing; Gothard - percolates slowly, soil blowing, erodes easily	0.15-0.43	2 - 4L	A - D

Willcox Area, AZ

1	Gothard-Crot-Stewart	Nearly level, moderately well drained and somewhat poorly drained, deep to very shallow, very slowly permeable, saline-alkali affected soils	Fine sandy loam, sandy loam, light loam	SM, ML	Not rated	Not rated	Not rated	Not rated	D
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KEY AND EXPLANATION OF FACTORS

USDA Texture: Particle sizes – clay and silt = <0.074 millimeter (mm) (defined by size **and** behavior); sand = 0.074 to 4.75 mm; gravel = 4.75 to 75 mm; loam = mixture of 7-27% clay + 28-50% silt + <52% sand.

Unified Soil Classification: CL = low plasticity clays, GC = clayey gravels, GM = silty gravels, ML = inorganic silts and very fine sands, SC = clayey sands, SM = silty sands, SP = poorly graded sands, gravelly sands, little or no fines.

Erosion Factor, K – K is used to estimate erosion using the Revised Universal Soil Loss Equation (RUSLE). K values reflect the rate of soil loss per rainfall-runoff (R) erosion index [ton * acre * h(hundreds of acre * foot * tonf * in)⁻¹]. Values of K vary from 0.05 to 0.65. Fine-textured clays have low K values of 0.05 to 0.15 because the particles are resistant to detachment. Coarse-textured soils, such as sands, have low K values of 0.05 to 0.20 even though particles are easily detached because of high infiltration capacity that results in low runoff. Medium-textured soils such as silt loam have moderate K values of 0.25 to 0.45 because the soils are moderately susceptible to detachment and lower infiltration capacity produces moderate runoff. Soils with high silt content have the highest K values (0.45 to 0.65) because silt particles are easy to detach and silt soils tend to crust, producing high levels of runoff (Toy, T.J. and Foster, G.R 1998)

Wind Erodibility Groups are used to predict the susceptibility of the soil to blowing. Groups 1 (sands), 2 (loamy sands), and 3 (sandy loams) are very highly erodible to highly erodible. Groups 4L (calcareous loamy soils) and 4 (clays and clay loams) are erodible but crops can be grown if erosion control measures are used. Group 5, 6, and 7 soils (various types of loams) are slightly erodible to very slightly erodible. Group 8 soils (stony or gravelly soils) are not subject to soil blowing.

Hydrologic Groups are used to estimate runoff from precipitation. Group A soils have a high infiltration rate and therefore a low runoff potential. Group B soils have a moderate infiltration rate. Group C soils have a slow infiltration rate. Group D soils have a very slow infiltration rate and therefore the highest runoff potential.

Appendix H-4

Onan Cummins 350DFCC Generator Set Data Sheets



350DFCC

ONAN GENERATOR SET

EXHAUST EMISSION DATA SHEET

ENGINE

Model: Cummins NTA855-G3 Bore: 5.5 in. (140 mm)
Type: 4 Cycle, In-Line 6 Cylinder Diesel Stroke: 6 in. (152 mm)
Aspiration: Turbocharged and Aftercooled Displacement: 855 cu. in. (14.0 liters)
Compression Ratio: 14:1
Emission Control Device: Turbocharger and Aftercooler, with Variable Timing

PERFORMANCE DATA

STANDBY

PRIME

BHP @ 1800 RPM (60 Hz)	535	480
Fuel Consumption (gal/Hr)	25.3	22.9
Exhaust Gas Flow (CFM)	3190	2785
Exhaust Gas Temperature (°F)	980	970

EXHAUST EMISSION DATA

(All Values are Grams per HP-Hour)

COMPONENT

STANDBY

PRIME

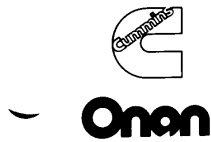
HC (Total Unburned Hydrocarbons)	0.30	0.25
NOx (Oxides of Nitrogen as NO ₂)	9.25	8.55
CO (Carbon Monoxide)	2.25	1.50
PM (Particulate Matter)	0.17	0.13
SO ₂ (Sulfur Dioxide)	0.59	0.59

TEST CONDITIONS

Data was recorded during steady-state rated engine speed (± 25 RPM) with full load (± 2%).
Pressures, temperatures, and emission rates were stabilized.

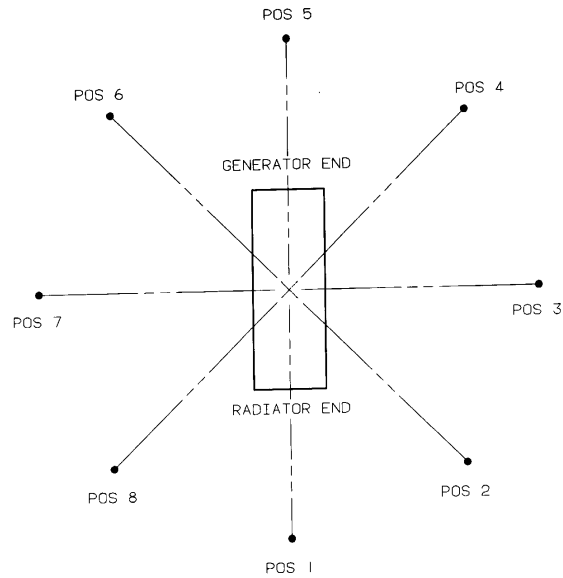
Fuel Specification: ASTM D975 No. 2-D diesel fuel with 0.2% sulfur content (by weight),
and 42-50 cetane number.
Fuel Temperature: 99 ± 9 ° F (at fuel pump inlet)
Intake Air Temperature: 77 ± 9 ° F
Barometric Pressure: 29.6 ± 1 in. Hg
Humidity: NOx measurement corrected to 75 grains H₂O/lb dry air

The NOx, HC, CO and PM emission data tabulated here were taken from a single engine under the test conditions shown above. Data for the other components are estimated. These data are subject to instrumentation, and engine to engine variability. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.

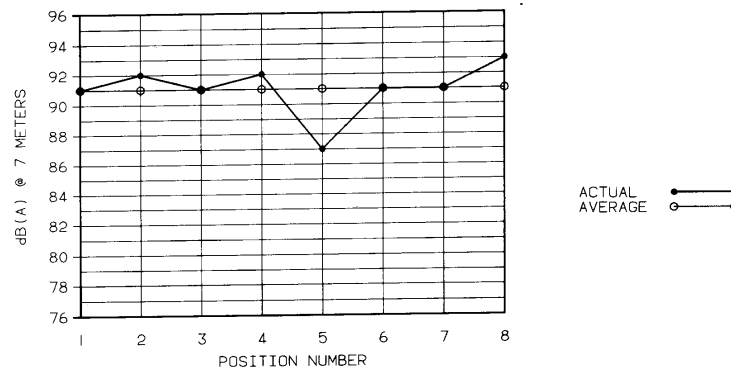


Measured Sound Performance

350 DFCC 60 Hz



MEASURED SOUND LEVELS - 60 HZ



- Note:**
1. All positions 23 Feet (7m) from perimeter of genset.
 2. Unhoused genset operating at full load
 3. Does not include exhaust noise.
 4. Test conducted on 100 foot diameter asphalt surface.

Drawing Reference Number: **178-0391**

Onan is a registered trademark of Onan Corporation

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1/94 Bulletin **MSP-114**

SCREEN MODEL OUTPUT LISTINGS

04/18/00

19:22:10

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

El Paso Tucson Backup Generator CO Emissions

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .334400
STACK HEIGHT (M) = 3.6600
STK INSIDE DIAM (M) = .2032
STK EXIT VELOCITY (M/S) = 46.4245
STK GAS EXIT TEMP (K) = 800.0000
AMBIENT AIR TEMP (K) = 291.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 3190.0000 (ACFM)

BUOY. FLUX = 2.990 M**4/S**3; MOM. FLUX = 8.093 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	.5028	3	10.0	10.0	3200.0	8.53	2.27	2.08	NO
100.	62.63	4	4.0	4.0	1280.0	15.84	16.07	14.23	NO
200.	36.50	4	2.0	2.0	640.0	28.02	31.57	28.07	NO
300.	31.44	6	1.0	1.0	10000.0	39.11	32.79	22.36	NO
400.	33.13	6	1.0	1.0	10000.0	39.11	42.09	27.25	NO
500.	30.72	6	1.0	1.0	10000.0	39.11	51.22	31.89	NO
600.	27.29	6	1.0	1.0	10000.0	39.11	60.13	36.27	NO
700.	23.96	6	1.0	1.0	10000.0	39.11	68.81	40.40	NO
800.	21.06	6	1.0	1.0	10000.0	39.11	77.26	44.32	NO
900.	18.60	6	1.0	1.0	10000.0	39.11	85.49	48.05	NO
1000.	16.55	6	1.0	1.0	10000.0	39.11	93.52	51.60	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
30. 98.49 3 10.0 10.0 3200.0 8.53 6.81 6.23 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	98.49	30.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

04/18/00

19:19:29

*** SCREEN3 MODEL RUN ***
 *** VERSION DATED 96043 ***

El Paso Tucson Backup Generator NOX Emissions

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = 1.37470
 STACK HEIGHT (M) = 3.6600
 STK INSIDE DIAM (M) = .2032
 STK EXIT VELOCITY (M/S) = 46.4245
 STK GAS EXIT TEMP (K) = 800.0000
 AMBIENT AIR TEMP (K) = 291.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN
 BUILDING HEIGHT (M) = .0000
 MIN HORIZ BLDG DIM (M) = .0000
 MAX HORIZ BLDG DIM (M) = .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
 VOLUME FLOW RATE = 3190.0000 (ACFM)

BUOY. FLUX = 2.990 M**4/S**3; MOM. FLUX = 8.093 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	2.067	3	10.0	10.0	3200.0	8.53	2.27	2.08	NO
100.	257.5	4	4.0	4.0	1280.0	15.84	16.07	14.23	NO
200.	150.0	4	2.0	2.0	640.0	28.02	31.57	28.07	NO
300.	129.2	6	1.0	1.0	10000.0	39.11	32.79	22.36	NO
400.	136.2	6	1.0	1.0	10000.0	39.11	42.09	27.25	NO
500.	126.3	6	1.0	1.0	10000.0	39.11	51.22	31.89	NO
600.	112.2	6	1.0	1.0	10000.0	39.11	60.13	36.27	NO
700.	98.52	6	1.0	1.0	10000.0	39.11	68.81	40.40	NO
800.	86.57	6	1.0	1.0	10000.0	39.11	77.26	44.32	NO
900.	76.48	6	1.0	1.0	10000.0	39.11	85.49	48.05	NO
1000.	68.04	6	1.0	1.0	10000.0	39.11	93.52	51.60	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
 30. 404.9 3 10.0 10.0 3200.0 8.53 6.81 6.23 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	404.9	30.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

04/18/00

19:24:21

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

El Paso Tucson Backup Generator PM Emissions

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = .253000E-01
STACK HEIGHT (M) = 3.6600
STK INSIDE DIAM (M) = .2032
STK EXIT VELOCITY (M/S) = 46.4245
STK GAS EXIT TEMP (K) = 800.0000
AMBIENT AIR TEMP (K) = 291.0000
RECEPTOR HEIGHT (M) = .0000
URBAN/RURAL OPTION = URBAN
BUILDING HEIGHT (M) = .0000
MIN HORIZ BLDG DIM (M) = .0000
MAX HORIZ BLDG DIM (M) = .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 3190.0000 (ACFM)

BOUY. FLUX = 2.990 M**4/S**3; MOM. FLUX = 8.093 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	.3804E-01	3	10.0	10.0	3200.0	8.53	2.27	2.08	NO
100.	4.738	4	4.0	4.0	1280.0	15.84	16.07	14.23	NO
200.	2.761	4	2.0	2.0	640.0	28.02	31.57	28.07	NO
300.	2.379	6	1.0	1.0	10000.0	39.11	32.79	22.36	NO
400.	2.507	6	1.0	1.0	10000.0	39.11	42.09	27.25	NO
500.	2.324	6	1.0	1.0	10000.0	39.11	51.22	31.89	NO
600.	2.065	6	1.0	1.0	10000.0	39.11	60.13	36.27	NO
700.	1.813	6	1.0	1.0	10000.0	39.11	68.81	40.40	NO
800.	1.593	6	1.0	1.0	10000.0	39.11	77.26	44.32	NO
900.	1.408	6	1.0	1.0	10000.0	39.11	85.49	48.05	NO
1000.	1.252	6	1.0	1.0	10000.0	39.11	93.52	51.60	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
30. 7.451 3 10.0 10.0 3200.0 8.53 6.81 6.23 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	7.451	30.	0.

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

04/18/00

*** SCREEN3 MODEL RUN ***
 *** VERSION DATED 96043 ***

El Paso Tucson Backup Generator SO2 Emissions

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = .880000E-01
 STACK HEIGHT (M) = 3.6600
 STK INSIDE DIAM (M) = .2032
 STK EXIT VELOCITY (M/S) = 46.4245
 STK GAS EXIT TEMP (K) = 800.0000
 AMBIENT AIR TEMP (K) = 291.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = URBAN
 BUILDING HEIGHT (M) = .0000
 MIN HORIZ BLDG DIM (M) = .0000
 MAX HORIZ BLDG DIM (M) = .0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
 VOLUME FLOW RATE = 3190.0000 (ACFM)

BUOY. FLUX = 2.990 M**4/S**3; MOM. FLUX = 8.093 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
10.	.1323	3	10.0	10.0	3200.0	8.53	2.27	2.08	NO
100.	16.48	4	4.0	4.0	1280.0	15.84	16.07	14.23	NO
200.	9.604	4	2.0	2.0	640.0	28.02	31.57	28.07	NO
300.	8.273	6	1.0	1.0	10000.0	39.11	32.79	22.36	NO
400.	8.719	6	1.0	1.0	10000.0	39.11	42.09	27.25	NO
500.	8.084	6	1.0	1.0	10000.0	39.11	51.22	31.89	NO
600.	7.181	6	1.0	1.0	10000.0	39.11	60.13	36.27	NO
700.	6.307	6	1.0	1.0	10000.0	39.11	68.81	40.40	NO
800.	5.542	6	1.0	1.0	10000.0	39.11	77.26	44.32	NO
900.	4.896	6	1.0	1.0	10000.0	39.11	85.49	48.05	NO
1000.	4.355	6	1.0	1.0	10000.0	39.11	93.52	51.60	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
 30. 25.92 3 10.0 10.0 3200.0 8.53 6.81 6.23 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	25.92	30.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
